

# Materials Laboratory Strategic Directions 05-07

8/14/2006

## Pavements

| Linda Pierce |                               | 2005        |     |     |             |     |     | 2006        |     |     |             |     |     |             |     |     |             |     |     | 2007        |     |     |             |     |     |
|--------------|-------------------------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|
| Task         | Description                   | 1st Quarter |     |     | 2nd Quarter |     |     | 3rd Quarter |     |     | 4th Quarter |     |     | 5th Quarter |     |     | 6th Quarter |     |     | 7th Quarter |     |     | 8th Quarter |     |     |
|              |                               | Jul         | Aug | Sep | Oct         | Nov | Dec | Jan         | Feb | Mar | Apr         | May | Jun | Jul         | Aug | Sep | Oct         | Nov | Dec | Jan         | Feb | Mar | Apr         | May | Jun |
| 1            | Quieter Pavement, Phase I     |             |     |     |             |     |     |             |     |     |             |     |     |             | 50% |     |             |     |     |             |     |     |             |     |     |
| 2            | BST Protocol                  |             |     |     |             |     |     |             |     |     |             |     |     |             | 20% |     |             |     |     |             |     |     |             |     |     |
| 3            | Benefits of dowel bars        |             |     |     |             |     |     |             |     |     |             |     |     |             | 50% |     |             |     |     |             |     |     |             |     |     |
| 4            | PCCP Smoothness Specification |             |     |     |             |     |     |             |     |     |             |     |     |             | 50% |     |             |     |     |             |     |     |             |     |     |
| 5            | Performance of ¾" HMA         |             |     |     |             |     |     |             |     |     |             |     |     |             | 80% |     |             |     |     |             |     |     |             |     |     |

| Jeff Uhlmeyer |                                       | 2005        |     |     |             |     |     | 2006        |     |     |             |     |     |             |     |     |             |     |     | 2007        |     |     |             |     |     |
|---------------|---------------------------------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|
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|               |                                       | Jul         | Aug | Sep | Oct         | Nov | Dec | Jan         | Feb | Mar | Apr         | May | Jun | Jul         | Aug | Sep | Oct         | Nov | Dec | Jan         | Feb | Mar | Apr         | May | Jun |
| 6             | Rehabilitation Reports                |             |     |     |             |     |     |             |     |     |             |     |     | 50%         |     |     |             |     |     |             |     |     |             |     |     |
| 7             | Pavement Type Selection               |             |     |     |             |     |     |             |     |     |             |     |     | 50%         |     |     |             |     |     |             |     |     |             |     |     |
| 8             | Class D/Class D Modified              |             |     |     |             |     |     |             |     |     |             |     |     | 40%         |     |     |             |     |     |             |     |     |             |     |     |
| 9             | Thermal Imaging                       |             |     |     |             |     |     |             |     |     |             |     |     | 60%         |     |     |             |     |     |             |     |     |             |     |     |
| 10            | Implementation Tack Coat Findings     |             |     |     |             |     |     |             |     |     |             |     |     | 40%         |     |     |             |     |     |             |     |     |             |     |     |
| 11            | Eastern Region Pavement Performance   |             |     |     |             |     |     |             |     |     |             |     |     | 65%         |     |     |             |     |     |             |     |     |             |     |     |
| 12            | Forensic Investigations Annual Report |             |     |     |             |     |     |             |     |     |             |     |     | 50%         |     |     |             |     |     |             |     |     |             |     |     |
| 13            | Experimental Features Annual Report   |             |     |     |             |     |     |             |     |     |             |     |     | 50%         |     |     |             |     |     |             |     |     |             |     |     |

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| Dennis Crimmins |                            | 2005        |     |     |             |     |     | 2006        |     |     |             |     |     |             |     |     |             |     |     | 2007        |     |     |             |     |     |
|-----------------|----------------------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|
| Task            | Description                | 1st Quarter |     |     | 2nd Quarter |     |     | 3rd Quarter |     |     | 4th Quarter |     |     | 5th Quarter |     |     | 6th Quarter |     |     | 7th Quarter |     |     | 8th Quarter |     |     |
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| 14              | Identify HMA Deficiencies  |             |     |     |             |     |     |             |     |     |             |     |     | 60%         |     |     |             |     |     |             |     |     |             |     |     |
| 15              | Studded Tire Damage on HMA |             |     |     |             |     |     |             |     |     |             |     |     | 30%         |     |     |             |     |     |             |     |     |             |     |     |

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| Task | Description   |
|------|---|
| 1    | Identify location for quieter pavement study, develop test section layout, develop Special Provision, evaluate construction process and measure short-term impacts and develop a plan for long-term performance impacts (Phase II).<br><b>Status:</b> |
| 2    | Coordinate with the BST Task Force and the UW study to pursue refinement and implementation of the BST protocol.<br><b>Status:</b>  |
| 3    | Develop dowel bar white paper explaining science and need for use (response to Eastern Region).<br><b>Status:</b>   |
| 4    | Develop smoothness specification for concrete pavements.<br><b>Status:</b>  |
| 5    | Investigate performance of HMA ¾ inch mixes.<br><b>Status:</b>  |
| 6    | Rehabilitation reports – review process and speed up if possible, use annual report to identify common problems that need fixing (as identified develop).<br><b>Status:</b>   |
| 7    | Pavement type selection – annually report to the pavement type selection committee.<br><b>Status:</b>   |
| 8    | Update pavement performance of Class D and Class D modified HMA.<br><b>Status:</b>  |
| 9    | Investigate how WSDOT is addressing the potential thermal density differential on 2006 projects and how WSDOT might deploy the thermal segregation detection system developed by TxDOT.<br><b>Status:</b>   |
| 10   | Develop specifications and implement findings of tack coat test section results.<br><b>Status:</b>  |

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| <b>Task</b> | <b>Description</b>  |
|-------------|---|
| 11          | Investigate performance issues with NE Washington HMA pavements.<br><b>Status:</b>                                |
| 12          | Annual summary of results found in pavement failure Forensic Evaluations<br><b>Status:</b>                        |
| 13          | Annual summary of status of pavement experimental features<br><b>Status:</b>                                      |
| 14          | Identify HMA deficiencies (lack of structure, freeze/thaw, intersections with chronic rutting).<br><b>Status:</b> |
| 15          | Evaluate studded tire wear damage on HMA pavements.<br><b>Status:</b>   |